U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Charleston WV Chemical Leak - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

POLREP #5
Subject: Continuation of Response Activities/Removal Assessment
Charleston WV Chemical Leak
Charleston, WV
Latitude: 38.3685800 Longitude: -81.6066300

To:

From: Dennis Matlock and Melissa Linden, On-Scene Coordinators

Date: 2/12/2014

Reporting Period: February 4, 2014 to February 10, 2014

1. Introduction

1.1 Background

Site Number:		**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	CERCLA	**Response Type:**	Emergency

Response Lead:			**Incident Category:**	**Removal Assessment**
NPL Status:			**Operable Unit:**	
Mobilization Date:	**1/9/2014**		**Start Date:**	**1/9/2014**
Demob Date:			**Completion Date:**	
CERCLIS ID:			**RCRIS ID:**	
ERNS No.:			**State Notification:**	
FPN#:			**Reimbursable Account #:**	

1.1.1 Incident Category

Tank failure and subsequent chemical release into the Elk River, Etowah, WV.

.

1.1.2 Site Description

The Site consists of one breached tank, which is component to the facility, along with the soils beneath the tank, the pathway towards the Elk River, and the affected portion of the Elk River.

1.1.2.1 Location

The incident occurred at the Freedom Industries, located at 1015 Barlow

Drive, Charleston, Kanawha County, WV 25311.

1.1.2.2 Description of Threat

An imminent substantial endangerment to welfare and/or the public caused by a chemical release.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

WVDEP conducted the initial assessment of the scene, in response to an odor complaint to their Air Division. EPA mobilized to the Site and assumed a support role to WVDEP. EPA received reports through WVDEP that the chemical was identified as "Eastman Crude MCHM", which is a mixture of components, predominantly 4-methylcyclohexanemethanol. There is a licorice odor to the compound, which is caused by 4-(methoxymethyl) cyclohexanemethanol. The material was classified as non-toxic. However, analytical testing for this particular compound is still being developed; there is no drinking water method available. Dupont was assisting the West Virginia American Water Company (WVAWC) with the testing procedure.

The spill occurred from one of three tanks that contain the MCHM. The secondary containment around the tanks was inadequate and failed. It was estimated that 5,000 gallons of the material were released. However, the volume of the compound that actually entered the river is uncertain.

The RP utilized facility personnel and initiated the hiring of contractors to place boom along the left descending bank of

the Elk River, adjacent to the area of the spill. The RP also hired contractors to conduct land clean-up operations.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

See previous POLREPs for site information and actions conducted from January 9, 2014 through February 3, 2014.

2.1.2 Response Actions to Date

During this operational period, efforts were concentrated on water management on Site, including prevention of the potentially MCHM-contaminated water from reaching the Elk River. A large amount of the water was the result of increased precipitation, both heavy rain and snow that had melted due to a slight increase in temperatures. Additional sources of the water are not yet defined. One of the sources was determined to be water that is seeping from the subsurface soils/materials beneath the Site, including inside the containment area and along the slope that leads to the river.

Discussions this week concerning the off-Site water focused on determination of the source(s) of the water. Suggestions were made to conduct a dye test and follow the water pathway that originates from the opposite side of Barlow Road. However, WVDEP had concerns about both the test being unsuccessful and the dye reaching the river. Therefore, the dye test was not conducted.

The RP and WVDEP contacted West Virginia Department of Highways

(WVDOH) in order to obtain a permit for clearing activities in the ditch located between the abandoned railroad that parallels the front of the facility and Barlow Road. WVDOH granted the permit to the RP's contractor. The RP also contacted the lessor of the abandoned railroad, who granted permission to the RP to conduct operations in their right-of-way. CEC has drafted and submitted a plan for clearing the ditch, which involves light excavation to the original grade to re-establish natural storm water flow in the ditch. The RP is hopeful to identify a pathway for the off-Site water and divert the water around the facility to prevent further infiltration of the water into the containment area.

Throughout the week, the RP's contractor, Diversified, conducted 24-hour pumping operations from all pooled areas of the Site, including from both inside and outside of the containment area and the interceptor trench. Diversified estimated that approximately 1,000 gallons of water per hour were discharging into the culvert in the containment area. Additional time was required for pumping operations, as low temperatures occasionally caused the hoses to freeze. All of the water that is being collected is pumped into on-Site tanks and will be tested and disposed of in accordance with applicable state and federal requirements. A method of disposal of the MCHM-contaminated water is still being investigated; current options include disposal at a WWTP or solidification and subsequent disposal at a landfill.

Multiple layers of booms were deployed and/or repositioned near the shoreline of the facility. Attention was focused on the rising water level in the Elk River, which rose to approximately 12 feet on February

5, 2014, according to the gages at Queen Shoals, WV. The RP's contractor, Clean Harbors, conducted 24-hour inspections and maintenance of the booms, replacing the boom as required. By February 11, 2014, the water level in the Elk River decreased to approximately 6.5 feet, also according to the gage at Queen Shoals. At this time, concern about the discharge rate of water and height of the river has greatly diminished, as the river level has dropped to normal levels and no significant precipitation events are forecasted.

A honeycomb box with a vacuum hose inserted was placed in the trench, located downgradient of the culvert pipe that discharges to the rear of the facility. The honeycomb box was used to facilitate pumping the accumulated water out of the trench and to hold the poly liner in place. Prior to a forecasted heavy rain event, a plywood cover was installed over the trench boxes and tarps were placed from the top of the hillside, extending down the hillside and over the plywood cover to the downgradient side of the trench; this was done to allow precipitation runoff to flow to the river without contacting potentially contaminated soil and to prevent water accumulating in the trench from overflowing. Diversified conducts 24-hour oversight of the interceptor trench area. Currently, the water is pumped out of the trench every three hours.

Throughout the week, the facility continued to load-out glycerin product from the on-Site tanks and transport it to customers. The RP estimates that all of the product stored in the on-Site tanks will be removed from the Site within two weeks. The RP is under WVDEP order to remove all of the chemicals/product on

Site by March 15, 2014. Load out of MCHM/PPH product stored at the Poca Blending facility began during the reporting period. The product was transported for sale to customers. The FBI's Evidence Response Team was on Site on February 6 and 7, 2014. The team conducted a three-dimensional survey of the tanks and containment area. CSB was on Site and continued their investigation. CSB is working with the facility to obtain the section of tank 396 that breached so they can test the tank for its metallurgical properties and physical composition. CSB's completed study will recommend requirements for tank composition and specifications. CSB is subcontracting a tank expert to complete a survey of the tanks on Site and collect the necessary sample from tank 396. Following the completion of CSB's investigation, the RP will dismantle, cut, and remove the three MCHM tanks from the Site. Following removal of the MCHM tanks, under WVDEP approved plans and oversight, the RP's contractors will proceed with investigation/remediation efforts. The investigation will focus on potential subsurface contamination on Site, assessing if the MCHM is pooled in the substructure of the containment pad and/or the soils of the western slope of the facility, along the pathway to the river. Sampling efforts included collection of				

groundwater samples from the seven monitoring wells that were installed on Site in mid-January 2014. On February 6, 2014, monitoring wells MW-1, MW-2, and MW-7 were purged and left to re-charge. These wells are located along the eastern side of the facility, between the containment wall and Barlow Road. The RP's contractor and WVDEP collected split samples from each of these wells. EPA's contractor collected a split sample from monitoring well MW-2. On February 7-8, 2014, CEC collected groundwater samples from monitoring wells MW-3, MW-4, MW-5, and MW-6 using micro-purge (low-flow) sampling protocols, except for the VOC fraction which was collected using a dedicated bailer. These wells are located at the base of the slope behind the facility, adjacent to the Elk River. The RP's contractor, WVDEP, and EPA's contractor collected split samples from each of these four monitoring wells. The EPA samples were shipped to the OASQA Laboratory in Ft. Meade, MD to be analyzed for VOCs, and MCHM/PPH constituents.

The RP's contractor collected an additional water sample from just outside of the eastern tank containment wall. The sample was collected to further evaluate options for re-routing off-Site water around the Site.

WV OSHA was periodically on Site to inspect the conditions of the work zones and monitor worker safety.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The Responsible Party is identified as Freedom Industries, and is under orders from WVDEP. There are four orders

and one revision to an order. Orders include: a cease and desist oder; an order to develop a plan to empty all 14 tanks on Site; an order to remove all material from on-site above ground storage tanks (AST) by March 15, 2014; an order to report all on-site and all information of MCHM/PPH; and an order to begin to dismantle all ASTs on or before March 15, 2014.

2.1.4 Progress Metrics

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

EPA, EPA's contractors, and the USCG will support WVDEP's oversight of removal activities. The priority at this time is to contain the source and prevent further discharge of contaminants to the river. Future activities will include an assessment of an extent of contamination on Site. EPA will provide support to WVDEP with sampling activities, and other technical support, upon request.

2.2.1.2 Next Steps

- Divert the runoff water that is entering the containment area;
- Maintain/improve as necessary the intercept trench between the Site and the Elk River;
- Dismantle the MCHM tanks on Site and provide the necessary portions of the tanks to investigative entities;
- Remove the three MCHM tanks from the Site.

2.2.2 Issues

- There is the possibility of an unknown amount of MCHM/PPH and potentially other chemical liquids may exist beneath the tank;
- There is an unknown amount of MCHM/PPH that has seeped into the soils/materials located along the river bank;
- There is a large amount of water (approximately 500,000 gallons), potentially contaminated with MCHM, combined in both storage tanks on Site and at the Poca facility.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

Estimated Costs*	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
START	$118,869.00	$99,946.44	$18,922.56	15.92%
Intramural Costs				
Total Site Costs	**$118,869.00**	**$99,946.44**	**$18,922.56**	**15.92%**

*** The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s).**

Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer

Freedom Industries
EPA OSC on Site (Advisory Role)

2.5.2 Liaison Officer

EPA Mark Ferrell

2.5.3 Information Officer

3. Participating Entities

3.1 Unified Command/Facility (Freedom Industries)

WVDEP
USEPA
USCG
Freedom Industries

3.2 Cooperating Agencies

WVDHHR
National Guard
WVDNR
ORSANCO
WVAWC
CSB
CDC/ATSDR
WVDOH

4. Personnel On Site

WVDEP
USCG
USEPA
START (TechLaw)

Freedom Industries
Civil & Environmental Consultants
Clean Harbors
Diversified Services LLC
CSB
WVOSHA

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.